1. **What could be the purpose of the introduction to an academic paper? Choose from the given statements.**
2. To clarify the terminology in the title
3. To summarize the process of your research
4. To present all the important problems in your research
5. To explain how the findings are an advance
6. To show how the paper is organized
7. To attract the readers’ interest with a provocative idea
8. To show that the research is worth writing about
9. To state the starting point for the research
10. **Study the possible procedures of an introduction, and match the extracts from the introduction to “Shortest Path Algorithms: An Evaluation using Real Road Networks” (F. BENJAMIN ZHAN and CHARLES E. NOON) with the procedures they take.**

I. Describe the problem you are researching. ( )

II. Begin the literature review by describing the current research on your topic. ( )

III. Describe the general themes in the research related to your topic. ( )

IV. Note any gaps in the published research. ( )

V. Indicate the specific hypotheses or questions your project is focusing on. ( )

VI. Include why your particular project's focus is important and how it differs from previous research on the topic. ( )

VII. Present the contribution of your research. ( )

VIII. Show the organization of your paper. ( )

1. The computational results for this paper were obtained using the set of public domain C source codes for computing shortest paths provided by CHERKASSKY et al. (1993) with only slight modifications. Their implementations proved to be fast with respect to computation time and efficient with respect to storage requirements.
2. When faced with the task of computing shortest paths, one must decide which algorithm to choose. Depending on the application, algorithm runtime can be an important consideration in the decision making process.
3. The development, computational testing, and efficient implementation of shortest path algorithms have remained important research topics within related disciplines such as operations research, management science, geography, transportation, and computer science (DIJKSTRA, 1959; DIAL et al., 1979; GLOVER, KLINGMAN, and PHILIPS, 1985; AHUJA et al., 1990; GOLDBERG and RADZIK, 1993).
4. The primary goal of this paper is to identify which algorithms run the fastest on real road networks. A secondary goal is to better understand the sensitivity of algorithm performance to input data.
5. Although a number of computational evaluations have been reported in the literature (e.g., HUNG and DlVOKY, 1988; GALLO and PALLOTTINO, 1988; CHERKASSKY et al., 1993), there is no clear answer as to which algorithm, or set of algorithms, runs fastest on real road networks, the most common type of network faced by practitioners.
6. The computation of shortest paths is an important task in many network and transportation related analyses.
7. The remainder of this paper is organized as follows. Section 1 provides some background on the prior study of CHERKASSKY et al. (1993) and summarizes the algorithms tested in our study. Section 2 details the computational study and results. Section 3 concludes the paper with a set of recommendations regarding algorithm selection.
8. Past computational evaluations were mainly based on randomly generated networks. The methods for random network generation varied considerably. The resulting random networks ranged from complete networks with uniformly distributed arc lengths to highly structured grid networks. In comparison to real road networks, random networks often differ with respect to the degree of connectivity as indicated by the arc-to-node ratios. The real net works studied in this paper have arc-to-node ratios ranging from 2.66 to 3.28. This is different from many randomly generated networks described in the literature where arc-to-node ratios are reported as high as 10 (cf. GALLO and PALLOTTINO, 1988).
9. **The following paragraph is taken from the introduction of one paper. Please fill in the blanks to complete the paragraphs. The expressions have been given.**

Seanicaa Edwards, et al. (2006). Market Structure Conduct Performance (SCP) Hypothesis Revisited using Stochastic Frontier Efficiency Analysis

**Introduction**

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Market structure conduct and performance (SCP) framework (a)\_\_\_\_\_\_ the neoclassical analysis of markets. ... This (b)\_\_\_\_\_\_ the Chicago school of thought from 1960-80. They (c)\_\_\_\_\_\_ the rational for firms becoming big, price theory and econometric estimation. During 1980-90 game theory (d)\_\_\_\_\_\_ with emphasis on strategic decision making and Nash equilibrium concept. After 1990, empirical industrial organization with the use of economic theory and econometrics (e)\_\_\_\_\_\_ complex empirical modeling of technological changes, merger analysis, entry-exit and identification of market power.

There are two competing hypotheses in the SCP paradigm: the traditional “structure performance hypothesis” and “efficient structure hypothesis”. The structure performance hypothesis (f)\_\_\_\_\_\_ that the degree of market concentration is inversely related to the degree of competition. This is because market concentration encourages firms to collude. More specifically, the standard SCP paradigm (g)\_\_\_\_\_\_ that there is a direct relationship between the degree of market concentration and the degree of competition among firms. This hypothesis will (h)\_\_\_\_\_\_ if positive relationship between market concentration (measured by concentration ratio) and performance (measured by profits) (i)\_\_\_\_\_\_, regardless of efficiency of the firm (measured by market share). Thus firms in more concentrated industries will earn higher profits than firms operating in less concentrated industries, irrespective of their efficiency.